

THE GENUS *ONCIDIUM* SW. (ORCHIDACEAE)  
IN THE BAHAMA ARCHIPELAGO.

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The neotropical genus *Oncidium* is represented in the flora of the Bahama archipelago by two sections, the section *Oncidium* represented by *Oncidium bahamense* Nash ex Britton and Millspaugh, *Oncidium lucayanum* Nash ex Britton and Millspaugh, and *Oncidium sasseri* Moir and the section *Oblongata* Kzl. represented by *Oncidium floridanum* Ames. Two of these species, the equitants, *O. lucayanum* and *O. sasseri* are endemic to the Bahama Islands. The following data are results of our ongoing study of the taxonomy and ecology of the Orchidaceae of the Bahama archipelago and comprise the first modern comprehensive treatment of the genus in the Bahamas since Britton and Millspaugh (1920).

TAXONOMIC TREATMENT

***Oncidium*** Sw., in Vet Akad. Handl. Stockholm **21**: 239, Sept. 1800.

Epiphytic, epilithic, or terrestrially occurring rhizomatous plants. Stem pseudobulbous or leafy, enclosed by distichous or leaf bearing sheaths and with one to three terminal leaves. Leaves usually conduplicate basally, equitant, flat, or terete, thinly coriaceous to fleshily coriaceous or rigid. Inflorescence lateral, racemose or paniculate, solitary to many flowered. Flowers showy or inconspicuous, opening simultaneously or serially. Sepals subequal, spreading or reflexed, free or lateral sepals connate. Petals similar to sepals or larger. Lip entire or three- or multi-lobed, adnate to the base of the column, crest at base of disc consisting of a variously tuberculate callus. Column short, thick, usually with auricles or wings on either side of the stigma and a fleshy plate below the stigma. Anther terminal, operculate, incumbent. Pollinia 2, sulcate on distinct linear stipe with a small gland.

LECTOTYPE: *Epidendrum variegatum* Sw. (Garay, Taxon **19**: 44, 1970).

KEY TO THE SPECIES IN THE BAHAMA ISLANDS

1. Pseudobulbs inconspicuous, poorly developed; leaves triquetros, margin serrulate, crenulate or crenate; lateral sepals connate

- nearly to apex ..... 2
2. Rhizome stoloniferous ..... 3
3. Leaves yellow-green to olive-green with minute reddish-purple spots ..... *O. Sasserii*
3. Leaves olive-green to bronzy-purple without spots  
        ..... *O. bahamense*
2. Rhizome short, plants caespitose ..... *O. lucayanum*
1. Pseudobulbs large, compressed; leaves conduplicate to flat, margin entire; lateral sepals free ..... *O. floridanum*

1. ***Oncidium bahamense*** Nash ex Britton & Millspaugh, Bahama Fl. 97. 1920. (Fig. 1).

*Oncidium variegatum* Sw. var *bahamense* (Nash) Withner, Orchidata 6(6). 1966.

TYPE: Grand Bahama, Bahama Islands, *Brace 3689*. (Holotype: NY. Isotypes: F, US)<sup>1</sup>.

*Oncidium sylvestre* auct. non Lindl.: Northrop, Mem. Torrey Bot. Club. 12: 30, 1902; Cogn. in Urban, Symb. Ant. 6:655, 1910.

Plant epilithic or epiphytic, rhizomatous, to 65 cm tall; roots numerous, slender, canescent to velamentous; primary stem or rhizome stoloniferous, repent, decumbent, wiry, remotely several sheathed, scarious, ovate-triangular, acute, to 11 mm long, 4 mm wide; secondary stem modified into remotely produced pseudobulbs, to 12 cm apart, to 9 mm long, 4 mm wide, flattened, completely enclosed by 5–10 distichous leaves; leaves coriaceous, distichous, imbricated, produced at intervals along pseudobulb, olive-green to bronzy-purple, conduplicate, recurved, lanceolate, acute, to 14 cm long, 8 mm wide, margin cartilaginous and serrulate; inflorescence lateral, to 64 cm tall, peduncle slender, erect, distantly several sheathed, racemose or rarely paniculate above, 4–25 flowers; floral bracts minute, lanceolate, acute, to 2 mm long, 1 mm wide; ovary pedicellate, slender, to 18 mm long; sepals white to greenish-white, basal 2/3 with reddish-brown spots; dorsal sepal spatulate, basally clawed to attenuate, concave, emarginate, acute or apiculate, to 4 mm long, 2 mm wide; lateral sepals oblanceolate, concave, acute, connate nearly to apex, to 5 mm long, 3 mm wide; petals white to greenish-white, basal 1/2 with reddish-brown spots or bars, spatulate to ligulate, basally clawed to attenuate, concave, acute, margin undulate, to 6 mm long, 3 mm wide; labellum three-lobed, white,

<sup>1</sup>All specimens cited have been examined unless otherwise noted.

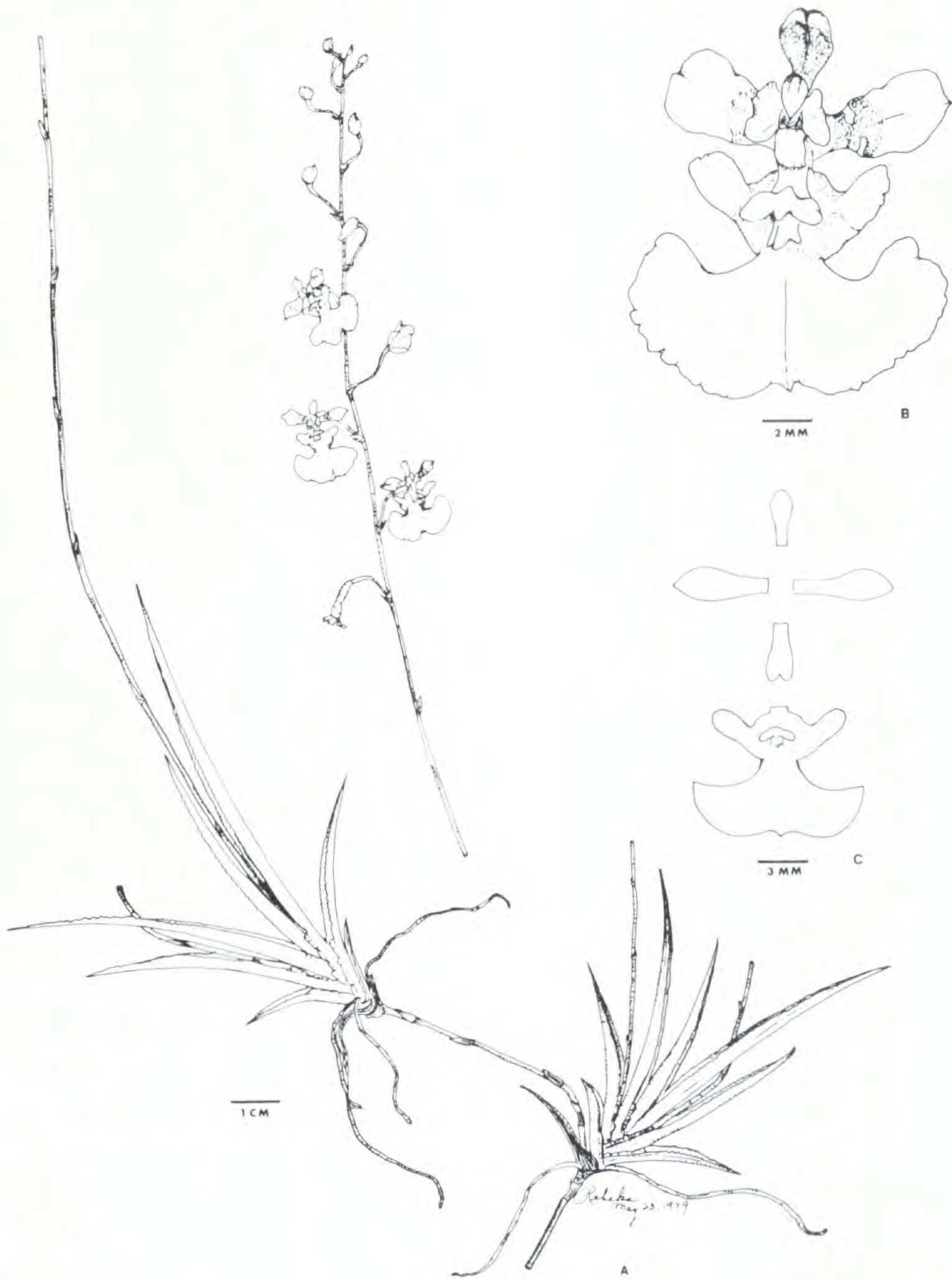


Figure 1. *Oncidium bahamense* Nash ex Britton & Millspaugh. A. Flowering plant. B. Flower, frontal view. C. Sepals, petals and labellum, frontal view.

occasionally with pink tint, to 12 mm long, 15 mm wide, lateral lobes basal, linear-elliptic to orbicular, obtuse to broadly rounded, reflexed, margin irregularly crenulate, midlobe separated from lateral lobes by a short isthmus with brown spots, midlobe reniform, cordate or broadly obovate, deeply emarginate, usually with an apicule in the sinus, margin irregularly crenulate, callosity on isthmus variable, yellow-orange with reddish-brown spots, usually provided with two anterior and three larger posterior tubercles; column stout, erect, to 3 mm long, 2 mm wide, with expanded lateral wings projecting from apex, white or pink, ovate, base obtuse, apex acute, irregularly lobed, to 1.1 mm long, 0.6 mm wide, anther white, apex purplish-brown; capsule pendent, to 15 mm long, 8 mm wide.

**DISTRIBUTION IN THE BAHAMA ISLANDS:** **Great Abaco**, June 1886, *Herrick s.n.* (NY); Snake Cay road, low coppice, 12 April 1979, *Sauleda & Correll 2316* (FAU). **Andros**, island coppice, 9 mi. N.W. of Fresh Creek, 16 April 1977, *Sauleda 1827* (SEL), 1828 (W), 1830 (US), 1832 (P), 1834 (NY), 1837 (S), 1839 (MO), 1841 (LE), 1842 (L), 1843 (K), 1846 (FAU), 1847 (F), 1848 (BR), 1849 (BM), 1850 (B), 1851 (AMES); London Creek, 5 May 1890, *Northrop & Northrop 543* (NY); Conch Sound, 22 May 1890, *Northrop & Northrop 543, 587* (NY); Mastic Point, May 1890, *Northrop & Northrop 587* (NY). **Grand Bahama**, Eight Mile Rocks, 16 April–8 May 1905, *Brace 3689* (F, NY, US).

**ADDITIONAL DISTRIBUTION:** Florida, (*Sauleda s.n.*, FAU).

**REPRODUCTIVE PERIOD:** March–August

**ECOLOGY:** On the island of Andros, *Oncidium bahamense* is found predominantly growing terrestrially in pine needle litter in island and high coppices.<sup>2</sup> Occasionally it is found growing epiphytically. On Great Abaco *O. bahamense* occurs sympatrically with *O. lucayanum* and *O. sasseri*, all growing epiphytically in low coppices. Occasionally *O. bahamense* is found growing terrestrially. Host plants include *Pithecolobium guadalupense* Chapm., *Coccoloba diversifolia* Jacq., *Reynosa septentrionalis* Urban, and *Psidium longipes* (Berg) McVaugh.

*Oncidium bahamense* is entirely restricted to the Bahama Islands except for a small population growing in northern Palm Beach County and Martin County on the Florida peninsula. This population is restricted to a xeric acid Pineland habitat, within which was located an old cemetery where the species may have been introduced by early travelers from the Bahamas.

**ADDITIONAL COMMENTS:** In the protologue, Britton and Millspaugh

<sup>2</sup>For a detailed treatment of Bahamian habitats, see Saulea and Adams, 1979.

described *Oncidium bahamense* as having, "a raceme of yellow flowers". Their confusion was probably generated by not having seen living material, having examined only herbarium specimens.

2. ***Oncidium floridanum*** Ames, Sched. Orch. 7: 13. 1924. (Fig. 2).

HOLOTYPE: Dade Co., Florida, *Eaton 957* (AMES).

*Oncidium sphacelatum* auct. non Lindl.: Ames, Contrib. Orch.

Fl. So. Fla. 22, 1904; Britton & Millspaugh, Bahama Fl. 97,

1920; Small, Fl. Miami 59, 1913.

Plant epilithic, rarely epiphytic, to 145 cm tall; roots numerous, thick, canescent to velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by scarious imbricating sheaths; secondary stem modified into pseudobulbs, clustered, oblong to ovate, compressed, ancipitous, to 14 cm long, 5 cm wide, partially enveloped by 3–6 distichous leaf-bearing sheaths, apically 1–3 leaved; leaves fleshy to coriaceous, narrowly linear-oblong to ligulate, subobtuse to acute, to 105 cm long, 2.5 cm wide; inflorescence lateral, to 142 cm tall, peduncle slender, suberect, distantly several sheathed, racemose to paniculate above, 16–85 flowers; floral bracts ovate to lanceolate, acute to acuminate, to 8 mm long, 2 mm wide; ovary pedicellate, slender, to 2.6 cm long; sepals yellow with brown spots, lanceolate to elliptic, acute, basally clawed to attenuate, concave, margin undulate, to 18 mm long, 4 mm wide; petals yellow with brown spots, ovate to elliptic, acute, basally clawed, margin undulate, to 14 mm long, 5 mm wide; labellum three-lobed, yellow, to 14 mm long, 9 mm wide, lateral lobes basal, orbicular, obtuse, margin reflexed, entire or crenulate, midlobe separated from lateral lobes by a short isthmus with brown spots, midlobe cordate to reniform, shallowly emarginate with apicule in sinus, margin entire or crenulate, callosity on isthmus variable, yellow-orange with reddish-brown spots, provided with 2–4 anterior and 2–4 posterior tubercles connected by a central ridge; column short, erect, to 5 mm long, 2 mm wide, with expanding lateral wings projecting from apex, yellow, ligulate, margin crenulate, to 2 mm long, 1 mm wide, anther yellow; capsule pendent, to 3 cm long.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, Marsh Harbor, 16 Dec. 1904, *Brace 1722* (NY); Eight Mile Bay, 26 Dec. 1904, *Brace 1850* (F), *1883* (F, NY); Abaco Heights, low coppice, 11 April 1979, *Sauleda & Correll 2259* (FAU), *2271* (FAU); Snake Cay road, low coppice, 12 April 1979, *Sauleda & Correll 2315* (FAU). **Bimini Group**, South Bimini, near airport, 21 April 1979, *Sauleda 2328* (FAU); North Bimini,



Figure 2. *Oncidium floridanum* Ames. A. Plant and basal portion of inflorescence. B. Inflorescence, distal portion. C. Flower, frontal view. D. Sepals, petals and labellum, frontal view.

in coppice north of town, 21 April 1979, *Sauleda* 2342 (FAU). **Berry Islands**, Great Harbor Cay, low coppice, end of Stede Bonnet road, 12 May 1979, *Sauleda & Correll* 2467 (USF); Anderson Cay, north end, 12 May 1979, *Sauleda & Correll* 2490 (FAU). **Andros**, high coppice, 6 mi. N.W. of Love Hill settlement, 10 May 1975, *Sauleda* 1035 (AMES); island coppice, 9 mi. N.W. of Fresh Creek, 6 Feb. 1977, *Sauleda* 1541 (FTG); rock scrub, 8 mi. south of Fresh Creek, 15 Oct. 1976, *Sauleda* 1145 (FAU); mangrove swamp around lake, 1 mi. N.W. of Love Hill settlement, 16 April 1977, *Sauleda* 1868 (FAU); low coppice, 2 mi. north of Love Hill settlement, 16 April 1977, *Sauleda* 1879 (F); Mangrove Cay, near Moxy Town, 22 July 1978, *Sauleda & Correll* 2145 (B); Mangrove Cay, near water tower, 23 July 1978, *Sauleda & Correll* 2155 (MO), 2156 (P); Mangrove Cay, 18 Aug.–10 Sept. 1906, *Brace* 4975 (F, NY); road to Conch Sound, 12 March 1907, *Brace* 6814 (F, NY); Mastic Point, 19–28 March 1907, *Brace* 6991 (F); Conch Sound, 3 March 1890, *Northrop & Northrop* 405 (NY); Mars Bay, 5 July 1890, *Northrop & Northrop* 602 (NY); Mastic Point, 1 June 1890, *Northrop & Northrop* 602 (NY); Lisbon Creek, Mangrove Cay, 16–19 Jan. 1910, *Small & Carter* 8493 (F, NY, US); Deep Creek, 20–22 Jan. 1910, *Small & Carter* 8632 (F, NY); coppice near Staniard Creek, 1–3 Feb. 1910, *Small & Carter* 8885 (F, NY, US), 8871 (NY). **Crooked Island**, Stopper Hill coppice, 9–23 Jan. 1906, *Brace* 4827 (F, NY). **Grand Bahama**, Eight Mile Rocks, 16 April–8 May 1905, *Brace* 3677 (F, NY); pinelands Eight Mile Rocks, 5–13 Feb. 1905, *Britton & Millspaugh* 2453 (F, NY). **New Providence**, on the ground, Maiden Head Coppice, 24 Aug. 1904, *Britton & Brace* 243 (F, NY, US); pineland and scrub along Harold Road, north of Harold Pond, 3 Aug. 1960, *Webster & Samuel* 10839 (US). **San Salvador**, hillside coppice, 12–13 March 1907, *Britton & Millspaugh* 6118 (F, NY).

GENERAL DISTRIBUTION. **Florida**, *Eaton* 957, AMES; **Cuba**, *Acuna* 4401, NY.

REPRODUCTIVE PERIOD: Flowers from April–October.

ECOLOGY. This species is found growing terrestrially in soil pockets in Pleistocene limestone. The habitats in which it occurs are high coppice, low coppice, island coppice, rock scrub, mangrove swamp, and pine forest.

ADDITIONAL COMMENTS: Small and Carter first discovered *Oncidium floridanum* in southern Florida in 1903. This species was confused with *O. sphacelatum* until 1924 when Ames described it as a distinct species. The species was considered endemic to southern Florida until Luer (1972) recognized that the Bahamian population was conspecific with the Florida population.

3. ***Oncidium lucayanum*** Nash ex Britton & Millspaugh, Bahama Fl. 98. 1920. (Figs. 3–4). TYPE: Bahama Islands, Andros, Fresh Creek, 10 June 1890, *Northrop & Northrop* 647 (HOLOTYPE, NY. ISOTYPE, F).

*Oncidium lucayanum* Nash ex Britton & Millspaugh var. *aureum* Moir, Fla. Orch. 16(3): 115, 1973. TYPE: Bahamas, reference made to photograph in Moir & Moir, Var. Onc. 43, 1970; no herbarium specimen known.

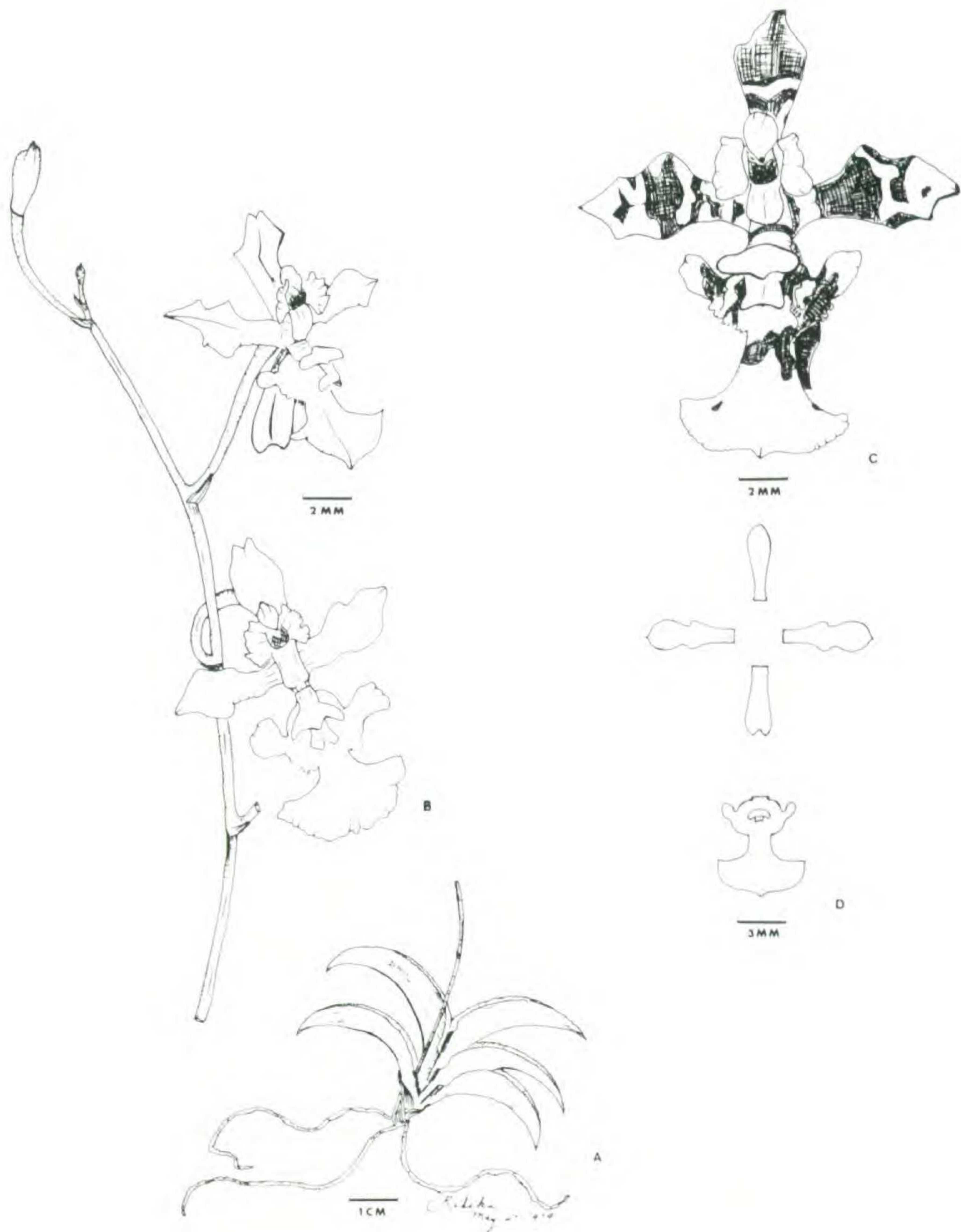


Figure 3. *Oncidium lucayanum* Nash ex Britton & Millspaugh. A. Plant. B. Inflorescence, distal portion. C. Flower, frontal view. D. Sepals, petals and labellum, frontal view.



*Oncidium lucayanum* Nash ex Britton & Millspaugh var. *purpureum* Moir, Fla. Orch. **16**(3): 115, 1973. TYPE: Abaco, Patterson, 1963; no herbarium specimen known.

*Oncidium lucayanum* Nash ex Britton & Millspaugh var. *rubiginosum* Moir, Fla. Orch. **16**(3): 115, 1973. Type: Abaco, Osment, 1971; no herbarium specimen known.

*Oncidium leiboldi* auct. non Rchb. f.: Cogn. in Urban, Symb. Ant. **6**: 658-659, 1910.

*Oncidium variegatum* auct. non Sw.: Cogn. in Urban, Symb. Ant. **6**: 656-657, 1910; Northrop. Mem. Torrey Bot. Club **12**: 30, 1902.

Plant epiphytic, rhizomatous, to 65 cm tall; roots numerous, slender, velamentous; primary stem or rhizome short, wiry, enclosed by imbricating scarious sheaths; secondary stem modified into pseudobulbs, clustered to 3 mm long, 1 mm wide, flattened, completely enclosed by 5-12 distichous leaves; leaves coriaceous, distichous, imbricated, produced at intervals along pseudobulb, yellow-green to olive-green, usually with minute reddish-purple spots, conduplicate, linear-falcate, acute, to 12 cm long, 8 mm wide, margin cartilaginous crenate; inflorescence lateral, to 62 cm tall, peduncle slender, erect, distantly several sheathed, racemose or rarely paniculate above, 1-60 flowers; floral bracts minute, lanceolate, acute, to 3 mm long, 1 mm wide; ovary pedicellate, slender, to 18 mm long; sepals yellow, with reddish-brown or purplish-brown spots; dorsal sepal subspatulate to oblanceolate, basally clawed to attenuate, concave, emarginate, acute or apiculate, to 8 mm long, 4 mm wide; lateral sepals oblanceolate, concave, acute, connate nearly to apex, to 7 mm long, 1 mm wide; petals white, yellow, or pink, with reddish-brown or purplish-brown spots, subspatulate to oblanceolate, basally clawed to attenuate, acute, margin undulate, to 8 mm long, 5 mm wide; labellum three-lobed, white, yellow, pink, or red, occasionally with reddish-brown or reddish-purple spots, to 12 mm long, 18 mm wide, lateral lobes basal, orbicular to linear-orbicular or obovate, obtuse to acute, reflexed, margin irregularly crenulate, midlobe separated from lateral lobes by a short isthmus with reddish-brown or purplish-brown spots, margin fringed, midlobe reniform, cordate, broadly obovate or flabellate, rounded, acute or deeply emarginate occasionally with an apicule in the sinus, margin entire, undulate or irregularly crenulate, callosity on isthmus variable, yellow with irregular brown spots, usually provided with 2-3 anterior and 2-3 posterior tubercles; column short, erect, to 4 mm long, 2 mm wide, with expanded lateral wings projecting from apex, white,

yellow, pink, or reddish purple, ovate, base obtuse, apex acute, irregularly lobed, margin irregularly crenate, to 1.0 mm long, 0.6 mm wide, anther yellow; capsule pendent, to 15 mm long, 8 mm wide.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, Great Cistern, 14 Dec. 1904, *Brace 1674* (F, NY); on mangroves, Marsh Harbor, 21 Dec. 1904, *Brace 1845* (F, NY); opposite Cherokee settlement, 31 Dec. 1904, *Brace 1993* (F); Abaco Heights, low coppice, 11 April 1979, *Sauleda & Correll 2260* (FAU); 2273 (FAU). **Andros**, mangrove swamp around lake 1 mi. N.W. of Love Hill settlement, 10 May 1975, *Sauleda 1034* (AMES); low coppice, 2 mi. N.W. of Love Hill settlement, 16 April 1977, *Sauleda 1869* (FAU); Fresh Creek, 10 June 1890, *Northrop & Northrop 647* (F, NY); coppice, Crow Hill, 23–24 Jan. 1910, *Small & Carter 8664* (F, NY). **Grand Bahama**, Pinders' Point, 5–13 Feb. 1905, *Britton & Millspaugh 2523*, (F, NY); coastal coppice, Golden Grove, 5–13 Feb. 1905, *Britton & Millspaugh 2729* (F, NY). **Great Inagua**, South of Alfred Sound, 30 May 1974, *Proctor & Gillis 33846*. (11).

REPRODUCTIVE PERIOD: Flowers from May–August.

ECOLOGY: This endemic species is found growing epiphytically on *Rhizophora mangle* L., *Ateramnus lucidus* (Sw.) Rothm., *Byrsonima cuneata* (Turez) P. Wilson, *Coccoloba diversifolia* Jacq., *Conocarpus erectus* L., *Eugenia confusa* DC, and *Pithecolobium guadalupense* Chapm. The habitats in which it occurs are mangrove swamp and low coppice.

ADDITIONAL COMMENTS: *Oncidium lucayanum* is a highly variable species, varying significantly in flower size, shape, and color (see Fig. 4). This variability has generated taxonomic confusion as evidenced by the publication of three varietal epithets. Our field observations have demonstrated that the numerous morphs comprise a gene pool with unrestricted flow, each morph being pollinated indiscriminately, by the bee *Centris versicolor* (Fabricius). Additionally, experimental selfing crosses of two of the morphs (Fig. 4A & 4D) have produced all of the forms currently found in the natural populations. For this reason, all varietal epithets are relegated to synonymy.

4. ***Oncidium sasseri*** Moir, Fla. Orch. **18**(4): 155–157. 1975. (Fig. 5)  
HOLOTYPE: Abaco, Bahama Island, *Sasser s.n.* (AMES).

Plant epiphytic, rhizomatous, to 42 cm tall; roots numerous, slender, velamentous; primary stem or rhizome stoloniferous, repent, wiry, remotely several sheathed, scarious, ovate, acute, to 9 mm long, 4 mm wide; secondary stem modified into remotely produced pseudobulbs to 5 cm apart, to 6 mm long, 3 mm wide, flattened, completely enclosed by 3–6 distichous leaves; leaves coriaceous,

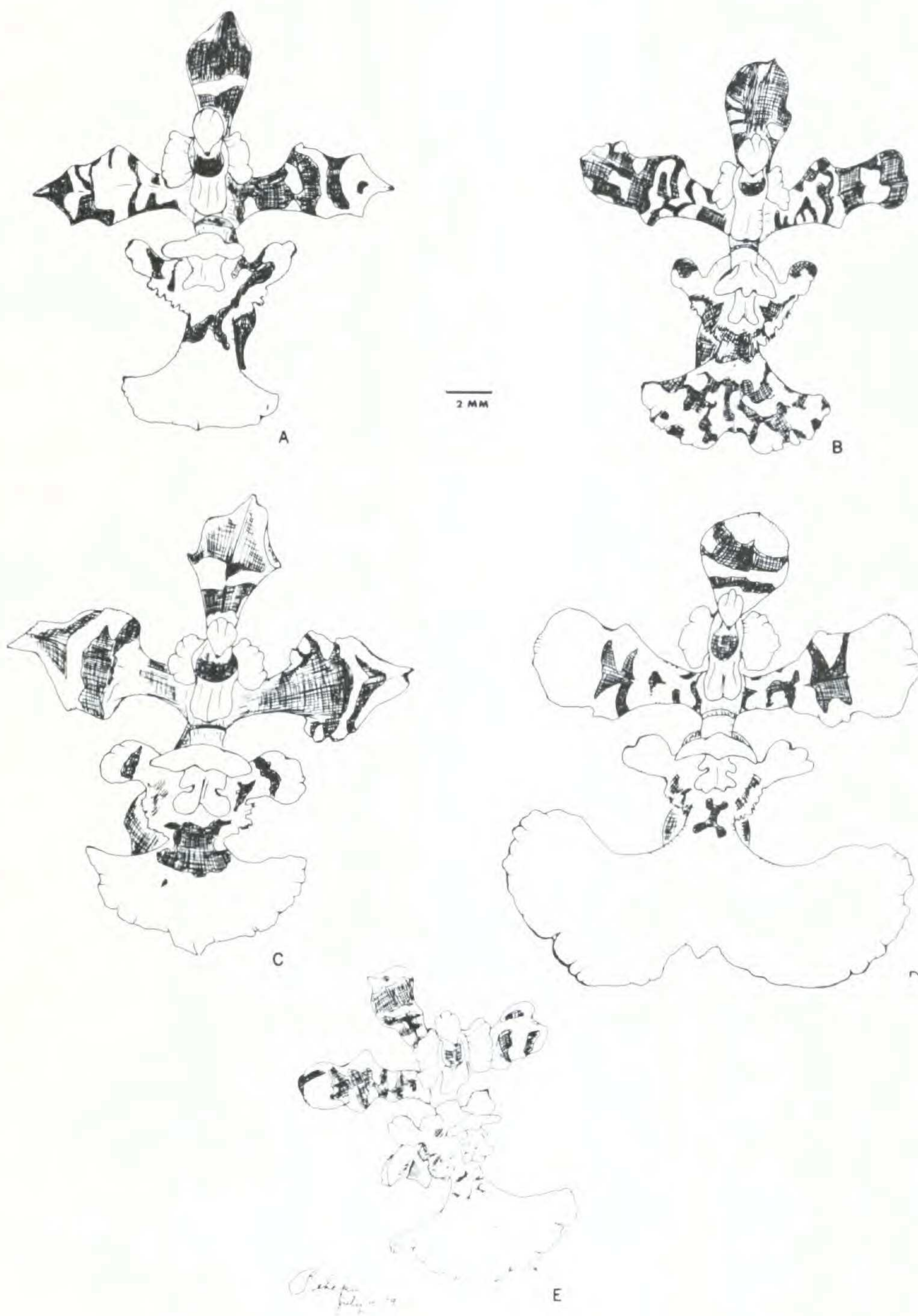


Figure 4. Five representative morphs of *Oncidium lucayanum* Nash ex Britton & Millspaugh commonly found in natural populations. A. White flower with brown markings. B. White flower with purple markings. C. White flower with brown markings. D-E. Yellow flower with brown markings.

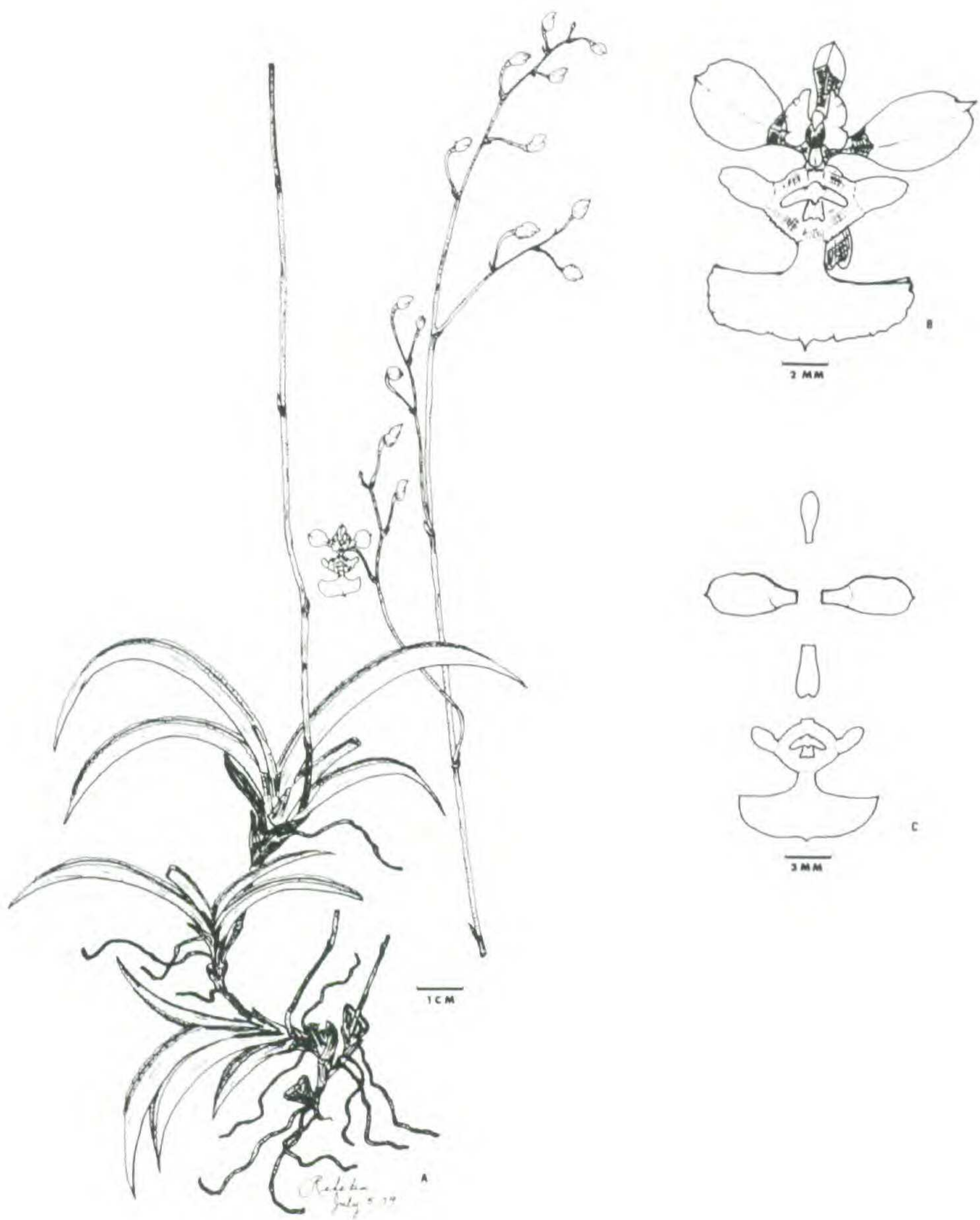


Figure 5. *Oncidium sasseri* Moir. A. Flowering plant. B. Flower, frontal view. C. Sepals, petals and labellum, frontal view.

distichous, imbricated, produced at intervals along pseudobulb, yellow-green to olive-green, with minute reddish-purple spots, conduplicate, linear-falcate, acute, to 8 cm long, 8 mm wide, margin cartilaginous, crenate; inflorescence lateral, to 28 cm tall, peduncle slender, erect, distantly several sheathed, racemose, 2–20 flowers; floral bracts linear-lanceolate, acute, to 3 mm long, 1 mm wide; ovary pedicellate, slender, to 16 mm long; sepals white, occasionally tinged with pink, basal  $2/3$  with reddish-brown spots; dorsal sepal oblanceolate to subspatulate, concave, emarginate to acute, basally clawed, to 8 mm long, 2 mm wide; lateral sepals oblanceolate, concave, acute, connate nearly to apex, basally clawed, to 6 mm long, 1 mm wide; petals white, occasionally tinged with pink, basal  $1/3$  with reddish-brown spots, oblanceolate, orbicular, or ligulate, acute to apiculate, basally clawed, margin undulate, occasionally irregularly crenulate, to 8 mm long, 4 mm wide; labellum three-lobed, white, occasionally tinged with pink, to 10 mm long, 12 mm wide, lateral lobes basal, orbicular to elliptic, obtuse to broadly rounded, reflexed, margin irregularly crenulate, midlobe separated from lateral lobes by a short isthmus, with reddish-brown spots, margin fringed, midlobe broadly obovate or flabellate, emarginate with an apicule in the sinus, margin undulate, entire or irregularly crenulate, callosity on isthmus yellow-orange with reddish-brown spots, usually provided with two anterior and two posterior tubercles connected by a central ridge; column short, erect, to 4 mm long, 2 mm wide, with expanding lateral wings projecting from apex, white or pink, lanceolate, base obtuse, apex acute, margin minutely crenulate, to 1.2 mm long, 0.8 mm wide, anther purple; capsule pendent, to 10 mm long, 5 mm wide.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, Abaco Heights, low coppice, 11 April 1979, *Sauleda & Correll* 2261 (FAU), 2272 (FAU); *Sasser s.n.* (AMES). **Andros**, low coppice, 2 mi. north of Love Hill settlement, 16 April 1977, *Sauleda* 1860 (FAU).

REPRODUCTIVE PERIOD: Flowers April–August

ECOLOGY: This endemic species is found growing epiphytically on *Byrsonima cuneata* (Turez) P. Wilson, *Conocarpus erectus* L., and *Eugenia confusa* DC, in high coppice, low coppice, and mangrove swamp.

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